

ENGINEERING TECHNICIAN

PURPOSE: Perform technical and para-professional engineering work in the areas of street, bridge, traffic, water, gas, sanitary sewer and storm sewer infrastructure systems.

FUNCTIONAL AREAS:

1. Perform surveying and data collection work.
 - * A. Assist in the analysis of construction plans and specifications for survey purposes.
 - * B. Perform to work to locate survey points.
 - * C. Prepare survey field notes.
 - * D. Direct the activities of other survey party members.
 - * E. Operate and maintain equipment to obtain accurate survey measurements.
 - * F. Collect, analyze, and record data.
2. Perform engineering drafting and design work.
 - * A. Create construction plans, maps, and charts manually or using a computer - aided-design (CAD) system.
 - B. Process survey information, including computer data entry work.
 - * C. Estimate construction quantities and prepare appropriate charts.
 - D. Recommend upgrades and revisions to project procedures and practices
3. Perform construction inspection work.
 - * A. Maintain daily log of construction activities and write progress and final reports.
 - * B. Assist in preparing change orders and supplemental agreements for approval.
 - * C. Document construction quantities.
 - D. Perform quality control tests on construction materials.
4. Conduct research and maintain records.
 - * A. Investigate complaints, inquiries, and requests.
 - * B. Study and report findings, conclusions, and recommendations in oral or written form.
 - * C. Review construction plans and specifications for compliance with City standards.
 - * D. Maintain, revise, and research manual or computer records.
 - * E. Participate in technical engineering studies and provide recommendations.
 - F. Perform other related work as assigned.

JOB REQUIREMENTS

Education & Experience Requirements

- ◆ A. Completion of a two-year Civil Engineering Technology degree, or equivalent; and
- ◆ B. two (2) years of verifiable work experience in an engineering position; or
- ◆ C. A combination of education and/or experience determined to be equivalent.

License Requirements

- ◆ A. Possession of a valid Minnesota Class “D” driver’s license or privilege by date of appointment and thereafter in order to operate survey vehicle.

Knowledge Requirements

- ◆ A. Knowledge of algebra, geometry, and trigonometry.
- ◆ B. Knowledge of technical engineering principles and practices.
- ◆ C. Knowledge of the principles, methods, equipment, and materials used in construction of streets, sidewalks, water and gas mains, sanitary and storm sewers, and various public work structures.
- ◆ D. Knowledge of the principles of drafting.
- ◆ E. Knowledge of applicable safety principles and practices.
- ◆ F. Knowledge of the principles of technical writing.
- ◆ G. Knowledge of principles of surveying.

Skill Requirements

- ◆ A. Skill in drafting, mapping, and surveying.
- ◆ B. Skill in the operation of drafting and surveying equipment.

Ability Requirements

- ◆ A. Ability to operate computers and CAD systems.
- ◆ B. Ability to apply standard engineering principles to utility and other public work improvements.
- ◆ C. Ability to prepare specifications, plans, technical reports, resolutions, and petitions.
- ◆ D. Ability to perform supervised drafting and design work.
- ◆ E. Ability to communicate effectively in oral and written forms.
- ◆ F. Ability to attain and maintain state certification requirements.
- ◆ G. Ability to establish and maintain effective working relationships with co-workers, supervisors, contractors, consultants, outside agencies, and the general public.
- ◆ H. Ability to transport oneself to, from, and around worksites.
- ◆ I. Ability to work outside year round.
- ◆ J. Ability to walk for long distances.
- ◆ K. Ability to transport and erect survey equipment up to 50 pounds.
- ◆ L. Ability to attend work on a regular basis.

* Essential functions of the position

- ◆ Job requirements necessary the first day of employment

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| Anlst: JA | Class: 4106 | Union: Basic | Pay: 28 | CSB: 20081105 |
| CC: 20090105 | Res: 09-0016R | EEOC: Technician | EEOF: | WC: 9410 |